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## EUROPEAN PATENT APPLICATION

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### (54) **A protein phosphatase 1 binding protein, R5**

(57) Human PPP1R5 polypeptides and DNA (RNA) encoding such PPP1R5 and a procedure for producing such polypeptides by recombinant techniques is disclosed. Also disclosed are methods for utilizing such PPP1R5, or compounds which inhibit or stimulate PPP1R5 for dysfunctions or diseases which involve resistance to the action of insulin on glycogen synthesis

are also disclosed. Agonist and antagonists of these PPP1R5 proteins and methods of their use are also disclosed. Also disclosed are diagnostic assays for detecting diseases related to mutations in the nucleic acid sequences and altered concentrations of the polypeptides. Also disclosed are diagnostic assays for detecting mutations in the polynucleotides encoding the PPP1R5 and for detecting altered levels of the polypeptide in a host.

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## PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 97 30 9273  
shall be considered, for the purposes of subsequent  
proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	Emest24 Database Entry Hsaa12835 Accession number AA112835; 9 November 1996 HILLIER L. ET AL.: "The WashU-Merck EST Project" XP002122127 * the whole document * ---	1,2,6,7	C12N15/12 C12N15/55 C07K14/47 C07K16/18 G01N33/50 A61K38/17 C12Q1/68 //C12N9/16, A61K48/00
D,X	MARTIN J. DOHERTY ET AL.: "Amino acid sequence and expression of the hepatic glycogen-binding (G1)-subunit of protein phosphatase-1" FEBS LETTERS, vol. 375, no. 3, 20 November 1995 (1995-11-20), pages 294-298, XP002122124 AMSTERDAM NL * the whole document * ---	1,2,6-9 -/-	
INCOMPLETE SEARCH			
<p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.</p> <p>Claims searched completely :</p> <p>Claims searched incompletely :</p> <p>Claims not searched :</p> <p>Reason for the limitation of the search:</p> <p>see sheet C</p>			
Place of search		Date of completion of the search	
THE HAGUE		16 November 1999	
Examiner			
Montero Lopez, B			
CATEGORY OF CITED DOCUMENTS			
<p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</p>			

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SHEET CApplication Number  
EP 97 30 9273

Although claims 16 and 17 are directed to a method of treatment of the human/animal body (Article 52(4) EPC), the search has been carried out and based on the alleged effects of the compound.

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Claim(s) not searched:  
13, 15, 18

## Reason for the limitation of the search:

Present claims 13, 15 and 18 relate to a compound defined by reference to a desirable characteristic or property, namely inhibiting or activating the biological activity of the polypeptide of claim 10. The claims cover all compounds having this characteristic or property, whereas the application does not provide support within the meaning of Article 84 EPC and/or disclosure within the meaning of Article 83 EPC for any specific compound. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 84 EPC). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search for these claims has not been carried out.



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## PARTIAL EUROPEAN SEARCH REPORT

Application Number

EP 97 30 9273

DOCUMENTS CONSIDERED TO BE RELEVANT		CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Category	Citation of document with indication, where appropriate, of relevant passages	
P,X	<p>DOHERTY M J ET AL: "Amino acid sequence of a novel protein phosphatase 1 binding protein ( R5 ) which is related to the liver- and muscle-specific glycogen binding subunits of protein phosphatase 1."            FEBS LETTERS, (1996 DEC 16) 399 (3) 339-43. , XP002122125            * the whole document *</p> <p>---</p>	1-12,14, 16,17, 19-23
E	<p>WO 98 08948 A (PRINTEN JOHN ANDREW ;SALTIEL ALAN ROBERT (US); WARNER LAMBERT CO () 5 March 1998 (1998-03-05)            * page 5, line 3 - line 24 *            * page 8, line 11 - page 12, line 5 *            * page 18, line 7 - page 19, line 20 *            * page 20, line 6 - line 8 *            * page 27, line 13 - page 28, line 24 *</p> <p>-----</p>	1,2,6-10
		TECHNICAL FIELDS SEARCHED (Int.Cl.6)

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 97 30 9273

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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16-11-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9808948 A	05-03-1998	AU 4062397 A EP 0941324 A	19-03-1998 15-09-1999

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82